



HANDLING INPUT GESTURE LISTENER



MULTITOUCH

- Multitouch is technology that enables to recognize the presence of more than one, point of contact with the surface.

```
@Override
public void render () {
    Gdx.gl.glClearColor(Color.WHITE.r, Color.WHITE.g, Color.WHITE.b, Color.WHITE.a);
    Gdx.gl.glClear(GL20.GL_COLOR_BUFFER_BIT);
    batch.begin();
    message = "";
    for(int i = 0; i < 5; i++){
        if(touches.get(i).touched)
            message += "Finger: " + Integer.toString(i) + " touch at: " +
                Float.toString(touches.get(i).touchX) +
                "," +
                Float.toString(touches.get(i).touchY) +
                "\n";
    }
    glyphLayout.setText(font, message);
    float x = w/2 - glyphLayout.width/2;
    float y = h/2 + glyphLayout.height/2;
    font.draw(batch, message, x, y);

    batch.end();
}
```



```
@Override
public boolean touchDown(int screenX, int screenY, int pointer, int button) {
    if(pointer < 5){
        touches.get(pointer).touchX = screenX;
        touches.get(pointer).touchY = screenY;
        touches.get(pointer).touched = true;
    }
    return true;
}

@Override
public boolean touchUp(int screenX, int screenY, int pointer, int button) {
    if(pointer < 5){
        touches.get(pointer).touchX = 0;
        touches.get(pointer).touchY = 0;
        touches.get(pointer).touched = false;
    }
    return true;
}
```



TOUCH GESTURES

- Gesture Detection
 - Touch Down: A user touches the screen.
 - Long Press: A user touches the screen for a some time.
 - Tap: A user touches the screen and lift the finger again. The finger not move outside a specified square area.
 - Pan: A user drags a finger across the screen.
 - Pan Stop: Called when no longer panning.
 - Fling: a user dragged the finger across the screen, then lifted it(Swipe gestures).
 - Zoom: A user places two fingers on the screen and moves them together/apart.
 - Pinch: Similar to zoom. This is better use for a rotation.